Pending claims (July 29, 2002)

34. A method for arresting the growth of or eradicating tumors in a mammal bearing one or more tumors comprising the steps of:

(a) comparing the daily plasma prolactin profile of said tumor bearing mammal to a normal daily prolactin profile for healthy mammals of the same species and sex;

(b) adjusting the daily plasma prolactin profile of said tumor bearing mammal by administering a prolactin enhancer at appropriate time intervals of day such that the adjusted daily plasma prolactin profile of said tumor bearing mammal conforms to or approaches the normal daily plasma prolactin profile for healthy members of the same species and sex of said mammal;

(c) contacting the cells of said tumor with a benzophenoxazine-analog photosensitizer having phototoxicity against tumor cells; and

(d) exposing said contacted tumor cells to light, such that the growth of said tumor is retarded or said tumor is eradicated.

35. The method of claim 34 wherein said tumor bearing mammal is a human.

36. The method of claim 35 wherein said prolactin enhancer is a member selected from the group consisting of prolactin, melatonin, metoclopramide, domperidone, 5-hydroxytryptophan, and pharmaceutically acceptable salts thereof.

37. The method of claim 36 wherein said prolactin enhancer is melatonin or a pharmaceutically acceptable salt thereof.

38. The method of claim 37 wherein said melatonin or a pharmaceutically acceptable salt thereof is administered in an amount within the range of about 0.5 to about 20 mg/person/day.

39. The method of claim 36 wherein said prolactin enhancer is prolactin.

40. The method of claim 35 wherein said prolactin enhancer is administered at a time between about 19:00 and 1:00.

41. The method of claim 37 wherein said prolactin enhancer is administered at a time between about 19:00 and 1:00.

42. The method of claim 38 wherein said melatonin or pharmaceutically acceptable salt thereof is administered at a time between about 19:00 and 1:00.

43. The method of claim 35 wherein said photosensitizer is selected from the group consisting of porphyrin dyes, phthalocyanine dyes, cyanine dyes, benzophenoxazine analogs, and pharmaceutically acceptable salts thereof.

44. The method of claim 37 wherein said photosensitizer is selected from the group consisting of porphyrin dyes, phthalocyanine dyes, cyanine dyes, benzophenoxazine analogs, and pharmaceutically acceptable salts thereof.

45. The method of claim 38 wherein said photosensitizer is selected from the group consisting of porphyrin dyes, phthalocyanine dyes, cyanine dyes, benzophenoxazine analogs, and pharmaceutically acceptable salts thereof.

46. The method of claim 40 wherein said photosensitizer is selected from the group consisting of porphyrin dyes, phthalocyanine dyes, cyanine dyes, benzophenoxazine analogs, and pharmaceutically acceptable salts thereof.

47. The method of claim 41 wherein said photosensitizer is selected from the group consisting of porphyrin dyes, phthalocyanine dyes, cyanine dyes, benzophenoxazine analogs, and pharmaceutically acceptable salts thereof.

49. The method of claim 43 wherein said benzophenoxazine analog is a member selected from the group consisting of
5-ethylamino-9-diethylamino-2-iodobenzo[a]phenothiazinium chloride and
5-ethylamino-9-diethylamino-benzo[a]phenothiazinium chloride.

50. The method of claim 44 wherein said benzophenoxazine analog is a member selected from the group consisting of

5-ethylamino-9-diethylamino-2-iodobenzo[a]phenothiazinium chloride and

5-ethylamino-9-diethylamino-benzo[a]phenothiazinium chloride.

51. The method of claim 45 wherein said benzophenoxazine analog is a member selected from the group consisting of

5-ethylamino-9-diethylamino-2-iodobenzo[a]phenothiazinium chloride and

5-ethylamino-9-diethylamino-benzo[a]phenothiazinium chloride.

52. The method of claim 46 wherein said benzophenoxazine analog is a member selected from the group consisting of

5-ethylamino-9-diethylamino-2-iodobenzo[a]phenothiazinium chloride and

5-ethylamino-9-diethylamino-benzo[a]phenothiazinium chloride.

53. The method of claim 47 wherein said benzophenoxazine analog is a member selected from the group consisting of

5-ethylamino-9-diethylamino-2-iodobenzo[a]phenothiazinium chloride and

5-ethylamino-9-diethylamino-benzo[a]phenothiazinium chloride.

54. The method of claim 43 wherein said benzophenoxazine analog is a member selected from the group consisting of 5-ethylamino-9-diethylamino-2-iodobenzo[a]phenothiaziniumchloride and 5-ethylamino-9-diethylamino-benzo[a]phenothiazinium chloride.

59. The method of claim 34 wherein administering the prolactin enhancer adjusts the daily prolactin peak of the tumor bearing mammal to conform or approach the daily prolactin peak for healthy members of the same species and sex of said mammal.

60. The method of claim 34 wherein administering the prolactin enhancer adjusts the daily prolactin peak of the tumor bearing mammal to peak at night.